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Patent Application of

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for

OPEN END MUTUAL FUND SECURITIZATION PROCESS

BACKGROUND OF THE INVENTION

1. Field of the Invention

A new financial process which securitizes open end mutual funds facilitating intra-day trading of the funds and linked derivative securities.

2. Description of the Prior Art

There are currently over 7,000 open end mutual funds registered with the Securities and Exchange Commission. None of these open end mutual funds or any index of open end mutual funds, or any linked derivatives are traded on a National Securities Exchange. The reason for this phenomenon lies in the way that open end mutual funds sell their shares, and subsequently buy back their shares from the public.

Open end funds are required by law to sell their shares at the net asset value (N.A.V.), which represents the total assets owned by the fund divided by the number of shares outstanding, plus a sales charge (also known as a sales load). When buying back their shares, open end funds must, by law, buy back their shares at their funds N.A.V.

Because many mutual funds make hundreds (if not thousands) of trades during the day, purchasing and selling a wide range of financial securities, some of which are difficult to value, it is time consuming, tedious, expensive and otherwise difficult to determine an exact N.A.V. during the day. Thus, over 99% of all open end funds allow investors to purchase and sell their funds only at the of the day. The remaining 1% of open end funds, commonly known as sector funds, calculate their N.A.V. every hour, allowing a more frequent ability to buy or sell their shares. In either case, however, the investor does not know what price will be paid for the open end fund shares until after the order has been placed, and the fund has calculated its N.A.V.

Recently, mutual fund portfolio's have developed a new type of fund called an open end fund of funds. A fund of funds is an open end fund that invests in other open end mutual funds. But like all the other open end funds created in the past, they can only be bought and sold at the end of day. Another new product developed is called the SPDR, which is short for Standard and Poors Depository Receipt. This security, which is traded on the American Stock Exchange, represents a fractional share of a basket of stocks known as the Standard and Poors 500 index (S&P500). While many mutual funds invest in the S&P500, the SPRD is not a mutual fund; it is a basket of stocks set up as unit investment trust, where the total amount of shares outstanding fluctuates daily.

In 1992, a large investment banking house created and became the market maker for a basket of stocks which attempted to replicate the performance of a few select open end sector funds, a basket that was traded intra-day on the Over the Counter Market (OTC). Unfortunately, because the net asset value of the open end sector funds was unknown during the 59 minutes of each hour that the basket was traded, the spread between the price that the firm was willing to buy the funds and sell the funds for was large. Further, the correlation between the performance of the basket of stocks to the performance of the open end sector funds was neither reliable or consistent. This problem existed because the open end fund managers were constantly buying and selling securities during the day, and the investment banking house did not know exactly which stocks the open end funds held.

Another recent development within the mutual fund industry is a service that allows investors to buy and sell open end funds during the day. The Jack White & Co., a regional brokerage firm, maintains a screen based computer system which provides a private market place for investors to buy and sell a small number (less than six percent) of all open end mutual funds at a price other than net asset value, provided buyer and seller can agree on a price. This service has failed to generate significant trading volume, however, because only the public can buy or sell fund shares. Institutional investors, pension funds, portfolio managers, and other professional investors, which traditionally represent 70 to 80% of trading volume, are prevented by law from buying or selling open end mutual funds at a price other than N.A.V. The Jack White program also allows short selling, but shares must be "found" which can take days, weeks, or months to complete the transaction. As a result of these restrictions, it is very difficult, if not impossible, for either the public or the professional investor to purchase or sell open end mutual funds during the day.

Because of the lack of liquidity and the legal obstacles involved in trading open end funds at prices other than N.A.V., up to now those skilled in developing new products for stock exchanges thought that there was no workable way to trade open end funds, an index of open end funds or linked derivative securities. The obstacles appeared insolvable.

The invention's open end fund securitization process will allow for the first time ; (a) intra-day trading of an unlimited number of mutual fund indexes comprised of open end funds; (b) intra-day trading of an unlimited number of open end mutual funds with a greater degree of liquidity; (c) intra-day trading of derivative securities linked to open end funds and indexes of open end funds.

All of the open end funds and products available suffer a number of disadvantages:

A) Open end funds cannot sell or buy back their shares at a price other than N.A.V. (plus sales load, if any).

B) Open end funds are unable to let their customers know what price they will receive when they place their order.

C) Open end funds are not traded on an exchange so investors cannot leverage their investments through the trading of derivative securities.

D) Open end funds do not allow investors to place orders including: good till cancelled, open, market, limit, stop loss, stop limit which would allow an investor to purchase or sell shares at a

specific price or time.

E) Open end funds impose fees for purchases and sales of their shares if they occur frequently.

F) Open end funds impose fees for investors who do not own a minimum amount of shares.

G) Open end shares cannot be easily sold short. Shares must be found, which could take days, weeks or even years.

H) All shares of open end mutual funds and unit investment trusts theoretically could be redeemed in one day, meaning a fund may have its assets drop to zero at any time.

I) Open end fund shares cannot be sold or purchased except through written notification, which may take several days to mail or process.

SUMMARY OF THE INVENTION

It is an object of the invention to make possible the trading of open end mutual funds on a National Securities Exchange (N.S.E.). This process is made possible by the creation of a second type of security, which will invest substantially all of its assets in the targeted open end mutual fund shares. The preferred embodiment for this new security is a "closed end fund of funds", which has a fixed number of shares outstanding, and a constant portfolio which is invested exclusively in the shares of the targeted open end fund(s). The result is a new security which will synthetically replicate the performance of those shares purchased, and do so with a high degree of correlation and consistency. This new security can then be listed on a National Securities Exchange and traded without restriction. After trading begins, linked derivative securities can then be listed and traded.

OTHER OBJECTS AND ADVANTAGES

A) Any open end fund, when securitized, can be listed on a stock exchange and traded at any second, minute or hour, regardless of the open end fund N.A.V.

B) Investors can determine what price will be paid before an order is placed.

C) A National Securities Exchange will be able to list derivatives on the securitized open end funds, because of the greater price transparency generated through the trading of the securitized open end funds. The invention will act as a hedge for market makers who wish to lay off their risk of making markets in options on the underlying security.

C) Investors will be able to leverage their investments.

D) Investors will be able to place GTC, open, stop loss, market, limit orders when buying or selling their funds.

E) Investors can buy or sell the securitized funds as often as they wish with no penalty.

F) Investors will be able to purchase or sell their shares immediately by making a phone call to their broker, or by electronic trading.

G) Investors will not be charged arbitrary fees for frequent purchases or selling of the securitized open end funds.

H) Investors will not be charged additional fees for owning small quantities of shares.

I) The securitized funds have fixed number of shares which provides stability of asset levels.

J) Investors will be able to sell shares short quicker, and with greater liquidity.

K) Open end fund management will benefit from reduced volatility in their cash levels and in their frequently traded customer account assets, resulting in lower fund expense ratio's.

L) Investors purchasing a securitized fund will pay a reduced sales load in many cases than they would otherwise have to pay because of the bulk purchasing power the securitized fund will have when investing in specific open end funds.

Further objects and advantages include the ability to trade a futures contract on both a securitized fund share and an index of securitized fund shares with linked derivative securities. In addition, the present invention solves a long existing but unsolved and unrecognized need. Many investors, both professional and non-professional own multiple mutual funds in an effort to diversify their investment portfolio's. An index of open end mutual funds would allow greater diversification, lower transaction costs, expanded investment choices and the ability to measure their fund performance against a relevant benchmark index. The index could be calculated many different ways with a great deal of flexibility; either equally price weighted, capitalization weighted or geometrically weighted, depending upon the need. Still further objects and advantages will become apparent from a consideration of the ensuing description and drawings.

BRIEF DESCRIPTION OF DRAWING

The present invention will be more fully understood by reference to the following detailed description thereof when read in conjunction with the attached drawings, and wherein:

Figure 1 is a schematic flowchart of an electronic computer program operating within a general data processing computer detailing the process by which the preferred embodiment of an open end mutual fund index is created.

Figure 2 is a chart of the means by which the preferred embodiment of an open end mutual fund index is synthetically replicated through the creation of a new security. The preferred embodiment for this new security is a "closed end fund of funds" and linked derivative securities.

DETAILED DESCRIPTION OF ~~DRAWING~~ THE PREFERRED EMBODIMENT

Figure 1

Figure 1a is: an electronic database of extensive statistical information stored in a computer containing the entire universe of open end mutual fund statistics in existence registered in the defined country or geographic area. The database includes extensive statistics for each open end fund. This information includes fund net asset value (N.A.V.) for each year, portfolio composition, investment objective, load adjusted and unadjusted return, maximum sales charge, median market capitalization, daily, monthly, quarterly, yearly, multi-year returns, mpt, beta, sharpe, R squared, standard deviation, historical risk/reward ratios, N.A.V. distribution adjusted earnings, payout ratio, potential capital gains exposure, price/book ratio, price/earnings ratio, prospectus, purchase constraints, redemption fees, sector weighting, shareholder fees, total return, total return percentile, turnover ratio, deferred fees, debt % total capitalization, dividends, distributor, telephone number, manager name, manager tenure, class of shares, beta, brokerage availability.

The computer itself has a preferred specification of at least 420 megabytes of internal memory (hard drive), eight megabytes of ram (random access memory), a cdrom player operating at quad speed, a pentium CPU, VGA monitor, keyboard.

Figure 1b is: a computer program algorithm eliminates those funds not available for purchase and puts these funds into a new database where these funds are stored in memory. This function acts as a filter eliminating from the search all open end mutual funds that are not available for purchase. The algorithm creates a new memory storage area containing those funds that fit within the criteria and stores those funds within a new section of the computer memory. This new memory location can be accessed by its new name: database 1. The history of open end mutual funds makes this algorithm very important. Because funds frequently close their doors to new money (as their popularity increases), keeping track of which funds can be purchased at the initial screening stage reduces the waste of memory that would occur by repeatedly saving large amounts of information redundantly to the hard drive.

Figure 1c is: a minimum asset size of the fund is selected; the time period(s) through which statistics will be retrieved (time t) is chosen and the computer is directed to create a new database where these funds are stored in memory. There are hundreds of funds that have assets of less than $5,000,000. The ability to buy and eventually sell a large amount of shares in a thinly capitalized fund could be problematic. In addition, the smaller funds tend to be the most volatile and tend to have shorter track records to measure their past performance. The minimum asset size selection will direct the computer to select only those funds that have a pre-selected asset level, mitigating some of these potential problems.

The time period for which statistics will be chosen (t) is very important. More so than many other types of security, an open end mutual fund is "ranked" for its performance based upon how well it does over specific time periods. The ability to segregate fund statistical information over various time horizons provides a unique tool to evaluate a funds performance.

Figure 1d is: a computer program algorithm which separates the group of funds stored in a database created by Figure 1c. This new group of funds is stored in a new memory location defined by its

specific investment criteria. This criteria may include a subgroup including the fund investment objective or the sector weightings of its portfolio. Currently, the major fund investment objective subgroups include Aggressive Growth, Growth and Income, Growth, Income, Bond, Sector, Asset Allocation, Specialty, Equity Income, Europe Stock, Foreign Stock, Government Bond, Hybrid Income, Small Company, World Stock and World Bond.

Figure 1e is: a computer program algorithm which searches and identifies all the funds where the statistical performance is greater than the aggregate subgroup over time periods (t) and puts these funds into a new database where these funds are stored in a new memory location. The performance of a fund can be measured in many ways. It could be based upon total return, load adjusted return, unadjusted load return, or a return with dividends reinvested. Once the specified performance criteria has been selected, the computer can average all of the funds in that subgroup before retrieving those funds that have above average returns. All funds, for example that have returns in the 49.99 % or better would be selected as being above the "average" subgroup return. These funds would then be stored in a new memory location, to be analyzed at a later time.

Figure 1f is: a computer algorithm instructing the computer to search and retrieve all funds where the risk is smaller than the aggregate subgroup over time periods (t) and store these funds into a new database. Funds, for example that have a smaller risk profile than 50 %(the exact average) of the subgroup would be selected as beating the "average" subgroup return. These funds would then be stored in a new memory location, to be analyzed at a later time.

Figure 1g is: a computer algorithm instructing the computer to combine the funds identified through Fig. 1e and Fig. 1f to create a new group of open end mutual funds that have the lowest combined risk to return ratio over time periods (t) and puts these funds into a new database where these funds are stored in a new memory location. Generally, this type of function is called a Relationship Search routine because it allows for linking together user defined criteria to produce one result. It is a very powerful tool for linking large amounts of information together.

Figure 1h is: the number of funds that the index will contain is chosen. This number could range from 1 to the number of funds in the database. Depending upon the investment objective or how much money is available to invest in the index, this number will fluctuate.

Figure 1i is: the index calculation method is selected. An index generally is calculated one of three ways; Equally priced, meaning all of the prices are added up and divided by the total number of securities; Capitalization Weighted, which is based upon the amount of price of the security times the number of shares outstanding; geometrically weighted, which involves a more complicated averaging of share prices. The index value can dramatically shift depending upon what weighting is used.

Figure 1j is: a formula sequentially analyzes each risk/reward ratio of each permutation of funds selected by the computer in 1k.

Figure 1k is: a computer algorithm directing the general data processor to eliminate the large

risk/reward combinations found in "database index" using the formula in Figure 1j sequentially storing in memory the smallest risk/reward combinations stopping only when the smallest risk/reward ratio is found, which results in the selection of the final index. When all of the funds with superior returns have been identified and stored, and all the funds with lower than average risk have been identified and stored, the computer can then match up all of the different combinations of funds to determine which group contains the optimally lowest risk/highest return ratio. This ratio can be calculated over multiple time periods to provide for example, the lowest ratio over 1,3,5, and 10 years. In the final group of funds, the number selected by the user in Figure 1h will determine how many funds the index ultimately will contain.

Figure 1L is: a computer algorithm prints out a graph of the combined funds over time periods (t) showing their combined statistical performance based upon the calculation method selected in Figure 1i . The computer is instructed to return to Figure 1a so the program may repeat itself.

Figure 2

Figure 2a is the group of open end mutual funds selected by Figure 1. These funds own financial securities including stock securities (box 1), bonds and money market instruments (box 2) and or hybrid, illiquid securities (box 3). The N.A.V. is calculated by the open end funds at the end of the day and disseminated to the closed end fund of funds..

Figure 2b is the closed end fund of funds which synthetically replicates the performance of those open end funds contained within Figure 2a. By investing all available assets in Figure 2a, the closed end fund of funds statistical performance correlates strongly and consistently with the open end funds located in Figure 2a A computerized accounting and reporting system, located within the closed end fund of funds, receives overall position reports of changes in fund share ownership through an electronic data link with the Exchange clearing corporation computer located in Figure 2e. Upon receipt of this information, the accounting and reporting system generates information regarding tax liabilities, financial reports and other relevant documentation to shareholders, government agencies and other relevant parties.

Figure 2c is an electronic data link between a National Securities Exchange computer and the closed end fund of funds. The closed end fund of funds calculates its net asset value and disseminates that information to the N.S.E. on a daily basis. The N.S.E. then publishes that information to market participants including broker/dealers and institutional investors (box 4), market makers (Box 5), brokerage firms (Box 6) and public investors (Box 7) who then buy and sell the synthetic fund shares intra-day at **any** mutually agreed upon price (which is used by market participants to derive the price of linked derivative securities). Linked derivative security valuations on the closed end fund of funds are generated in Figure 2f, based upon the market prices generated through real-time trading of the relevant closed end fund of funds by market participants located in Box 4, Box 5, Box 6, Box 7.

Figure 2d is the electronic data link between the N.S.E. clearing computer, which keeps track of the exchange trades that occur during the day, and the closed end synthetic fund.

Figure 2e is the N.S.E. clearing computer electronically calculating the overall positions of shareholders at the end of the day and then transferring all shareholder information to the closed end fund.

Figure 2f is the N.S.E. computer calculating an index of various closed end fund of funds traded. The valuation of the index and linked derivative securities is based upon the market prices generated through real-time trading of the relevant closed end fund of funds by market participants located in Box 4, Box 5, Box 6, Box 7.

THEORY OF OPERATION

While the inventor believes that an index of open end mutual funds comprised of those funds that have the largest return on investment and the lowest risk combination may outperform those funds that, in contrast, have demonstrated lower returns and higher risk, it must be noted that past performance does not guarantee similar performance in the future.

Conclusions, Ramifications and Scope of Invention

Thus, the reader will see that the index of mutual funds described herein provides a means for identifying superior historical performance within each subgroup obtainable through a screening process which minimizes the selection of high risk/low return open end mutual funds and maximizes the selection of those funds with low risk/high return statistical data. The hope is that by identifying and investing within an index of funds that have demonstrated superior risk/return ratios within a particular sector, these funds will continue to do produce superior returns with lower risk in the future than their peers.

The creation of a separate security, the preferred embodiment being a "closed end fund of funds", provides the means for investing intra-day in the desired open end funds, and enabling market participants to derive a real-time valuation for linked derivative securities.

While my above description contains many specifications, these should not be construed as limitations on the scope of the invention, but rather as an exemplification of one preferred embodiment thereof. Many other variations are possible. For example, instead of creating a closed end fund of funds, a unit investment trust could be created to replicate the performance of an open end fund or group of funds. While this security could have large swings in its capitalization level, it never-the-less may be able to replicate the performance of an open end fund or group of funds, and act as a hedge for listed derivative securities.

In addition, an index could be created based upon such strict requirements that the index could be limited to just one fund. Another index variation might be one that selects only those funds that beat an external index such as the S&P500 or Dow Jones Industrial Average. In addition, an index of securitized funds, as well as linked derivative securities including puts and calls, futures, caps and floors, total return swaps, collars, warrants, equity swaps, swaptions, knock-out options and variations thereof could be traded through the Over the Counter Market, which is located off the exchange floor. Accordingly, the scope of the invention should be determined not by the embodiments illustrated, but by the appended claims and their legal equivalents.